DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 74.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012774
Date Inspected: 17-Mar-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Goodwin Steel, UK

OSM Arrival Time: 750
OSM Departure Time: 1750
Location: Trentham, UK

CWI Name:	N/A			**CWI Present:**	☐ Yes	☑ No	
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Cable Band Castings

Summary of Items Observed:

The following report is based on Caltrans METS QA Inspector Mr. Mike Brcic's observations at Goodwin International (GI), Trentham, UK on 17 March 2010.

SHOP REVIEW:

While this Caltrans QA Inspector was on site, GI, he had opportunity to review the progress of current castings located in the machine shop. The following castings and their current status, as they were observed this day by the Caltrans Inspector, is reflected here:

~ GG29426-7, GG29427-1 (B6-1-M/F cable bands) and GG29429-4 (B7-1-F cable band) have been scrutinized by Dimensional Technicians, Rory Clay and Tony Godwin, of Goodwin International, at the Marking out stage of the Manufacturing Inspection Test Plan (MITP 12-02-2009 issue 3). During this QA Inspector's shift, these castings were verified to have appropriate thickness to accommodate proper machining.

~ WPP58, GG29426-3 and GG29427-5, B6 cable band, has begun a rough bore machining, from opposite direction, subsequent to previous day's machining, fulfilling step I2 of the MITP at station known as the Webster Bennett vertical bore.

~ GG29446-5, Strongback B14-CBT, located at station known as BTF2, is being final machined at joint face, which includes 55mm drilled holes as well as alignment keys, on surface known as area D of MITP.

REPAIR WELDING

GG29419-4 (B2-1-F) Observed welder D.McDonagh, welder ID DM596, performing Gas Tungsten Arc Welding (GTAW) process using 2.4 mm diameter filler material ER70S-A1 (.5% Mo), 3.2mm ceriated tungsten electrode in a 2G position. Shielding gas in use was 99.9 % pure Argon, at a flow rate of 12 liters a minute. Parameters of WPS 271 Rev 1 (casting repair cycle is classified as a Minor), were verified and followed; actual Amps during observation was 160, voltage 15.6. Temperature of casting was room temperature, 30ºC (above 5ºC minimum) interpass was below 235°C, confirmed with a temperature melting stick labeled 199C. “Excavation” in work were identified as #14, per the Weld Excavation Map. Observed travel speed and Heat input was 139 mm/min and 1.08 kj/min respectively.

DOCUMENT PACKAGE REVIEW

Document packages, for the following castings, by Panel Point, were presented for review following corrections noted and prior to dispatch to South Staff Coatings for metalization/paint.

EPP102, B1 cable band

~ GG29416-10, GG29417-10: Document package was returned to Mr. Ryder, QC representative of GI, for resolution to discrepancy noted to weld wire having been used during repair welding while in custody of GI. It is the intent of GI to delay the shipment to South Staff Coatings, pending resolution. *

EPP92, B3 cable band

~ GG29420-9, GG29421-15: Document package was returned to Mr. Ryder, QC representative of GI, due to further research required by Contractor for female, identified as -15, because of welder having logged the use of weld wire A18 as opposed to A30. *

WPP82, B3 cable band

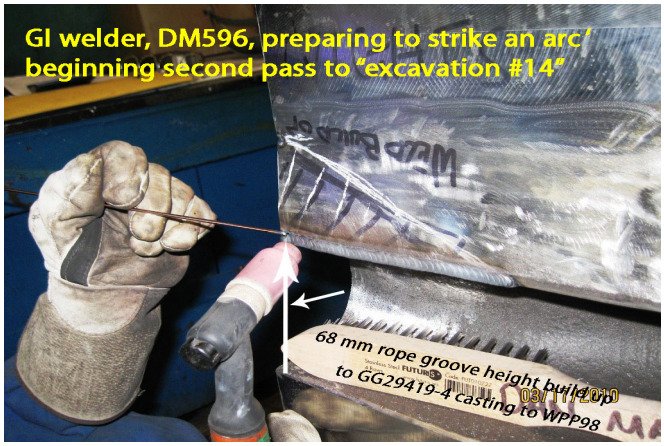
~ GG29420-12, GG29421-1: Document package was returned to Mr. Ryder, QC representative of GI, for preparation for shipment to South Staff Coatings.

WPP90, B3 cable band

~ GG29420-18, GG29421-12: Document package was returned to Mr. Ryder, QC representative of GI, for preparation for shipment to South Staff Coatings.

* After further research, the following eight (8) castings appeared to have been welded with the incorrect weld wire: GG29421-7 (excavation #15), GG29421-13(excavation #19 & 20), GG29421-15(excavation #9), GG29421-17(excavation #36), GG29417-1(excavation #18 & 19), GG29417-3(excavation #15), GG29424-4(excavation #3).
Following notification of the discrepancy, the Quality Director, Mr. Bentley had Positive Material Identification (PMI) performed to verify the deposited material Molybdenim content, preliminary results revealed a consistant reading of .03%, indicative of A18 specification. It is the intent of Mr. Bentley, Goodwin International's Quality Director, to research options and submit to project engineers methods of remediation.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with applicable contract documents.



Summary of Conversations:

See above for conversations that this QA Inspector was a party to.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 1(510)385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Brcic,Michael	Quality Assurance Inspector
Reviewed By:	Edmondson,Fred	QA Reviewer